

REMARKS

Claims 1-46 are pending in the application. Applicants respectfully request reconsideration of the rejections set forth in the Office Action dated August 12, 2005 in light of the following remarks.

Rejections Under 35 U.S.C. §102/103

Claims 1-20, 23-36, and 39-46 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,912,706 to Kikuchi et al. ('Kikuchi'). Claims 21-22 and 37-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi in view of U.S. Patent No. 5,818,536 to Morris et al. ('Morris'). Applicants respectfully traverse the rejections.

Kikuchi is concerned with motion vector sensitivity during transmission and the need to prevent failures in the transmission of motion vectors from spreading (see Background on column 4 lines 51-62). He notes that propagation for a single flawed motion vector can ruin an entire decoded picture. To overcome this problem, he invents a system to reduce transmission failures in delivery of motion vectors.

Accordingly, Kikuchi only discusses a codebook for motion vectors. He does not teach a "residual error codebook", a "residual error vector index", or a "residual error vector" as recited. Claim 1 for example recites "a residual error codebook comprising a set of residual error vectors and a residual error vector index associated with each residual error vector, each residual error vector in the set of residual error vectors comprising an array of predetermined motion compensation errors".

The Office Action dated August 12, 2005 points to FIG. 6 of Kikuchi to teach these limitations. However, the codebook in FIG. 6 is unquestionably a codebook for motion vectors (see col. 18, lines 1-5). Specifically, lines 4-5 read: "The codebook 204 stores vector quantized motion vector candidates in the form of code vectors". Thus, the supporting description of FIG. 6 of Kikuchi does not support the assertions made in the Office Action on page 3, and the codebook 204 includes motion vectors, not residual error vectors as asserted in the Office Action.

Moreover, FIG. 6 of Kikuchi, and its supporting description on column 18, lines 1-32, do not teach a "residual error codebook", a "residual error vector index", or a "residual error vector"

as recited in the claims. Instead, this section summarizes Kikuchi's codebook for motion vectors, and candidate motion vectors used to select a motion vector.

In all embodiments, Kikuchi uses DCT, quantization and variable length coding to code residual errors (see col. lines 27-37). He thus does not remotely suggest a "residual error codebook", a "residual error vector index", or a "residual error vector" as recited in the claims.

For at least these reasons, Kikuchi does not teach or suggest all the limitations in independent claims 1, 7, 14, 23, 34 and 40 and the independent claims are allowable.

Morris does not correct for deficiencies in Kikuchi, and similarly does not teach or suggest the independent claims and a residual error codebook including a set of residual error vectors and predetermined motion compensation errors in each residual error vector.

Dependent claims 2-6, 8-13, 15-22, 24-33, 35-39 and 41-43 each depend directly from independent claims 1, 7, 14, 23, 34 and 40, respectively, and are therefore respectfully submitted to be patentable over Kikuchi and/or Morris for at least the reasons set forth above with respect to the independent claims. Further, the dependent claims recite additional elements which when taken in the context of the claimed invention further patentably distinguish the art of record.

For example, dependent claim 3 recites "wherein the decoder apparatus performs pel-recursive motion estimation to produce motion vectors for each pixel in a block". Neither Kikuchi nor Morris teach or suggest pel-recursive motion estimation, which is a form of motion estimation. To reject this claim, the Office Action points to figures 17-18 of Kikuchi, which only show sample motion vectors. Kikuchi only describes block-based motion estimation, not pixel-based motion estimation or any specific type of pixel-based motion estimation such as pel-recursive motion estimation.

Withdrawal of the rejections under 35 USC §102(b) and §103(a) is therefore respectfully requested.

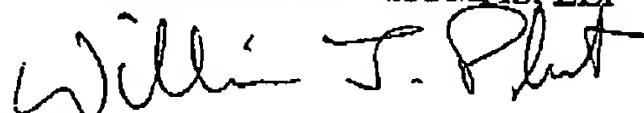
Applicants believe that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a

telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Response is to be charged to Deposit Account No. 50-0388 (Order No. CISCP193).

Respectfully submitted,

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